REDCIRCLE HCA

Data Extract

Install & User Guide

Application version: 2.25.0
Document generated: 20 October 2026
Download: https://dataextract.redcircleai.com/

RedCircle HCA Data Extract — Install & User Guide

Application version: 2.25.0 **Platform:** Windows 10 / 11 (64-bit)

This guide walks you through installing the RedCircle HCA Data Extract application and using every part of it, from signing in to producing an encrypted export. It is written for end users — no technical or developer knowledge is assumed.

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1. What the application does

RedCircle HCA Data Extract is a secure desktop tool for preparing and exporting healthcare data. You point it at your data sources (CSV files, Excel files, or databases), choose which columns to include, protect any patient-identifiable information, and produce a clean, encrypted export that can be shared safely with RedCircle or loaded into downstream systems.

Key ideas:

- **Everything runs on your machine.** Your source data is read locally; only the finished, encrypted export leaves your computer (and only when you choose to upload it).
- **Datasets** group your sources together for a reporting period.
- **Pseudonymisation and anonymisation** protect patient identifiers before anything is exported.
- **Encryption** (AWS KMS, optionally with your own password) secures the export file.

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2. System requirements

Requirement	Detail
Operating system	Windows 10 or Windows 11, 64-bit
WebView2 runtime	Required. Already present on virtually all current Windows machines; if missing, the installer adds it automatically (needs internet during install).
Disk space	A few hundred MB (application, runtime, and logs).
Internet access	Required for sign-in, uploads, and updates.
Admin rights	**Not required** — the app installs for your user account only. (IT teams deploying it across managed machines can use the per-machine MSI instead; see section 3.)

The application needs to reach these services over the internet: AWS Cognito (sign-in), `fileupload.redcircleai.com` (uploads/encryption), AWS S3, and the update server. If your organisation restricts outbound traffic, ask IT to allow `*.amazonaws.com`, `*.amazoncognito.com`, `*.cloudfront.net`, and `fileupload.redcircleai.com`.

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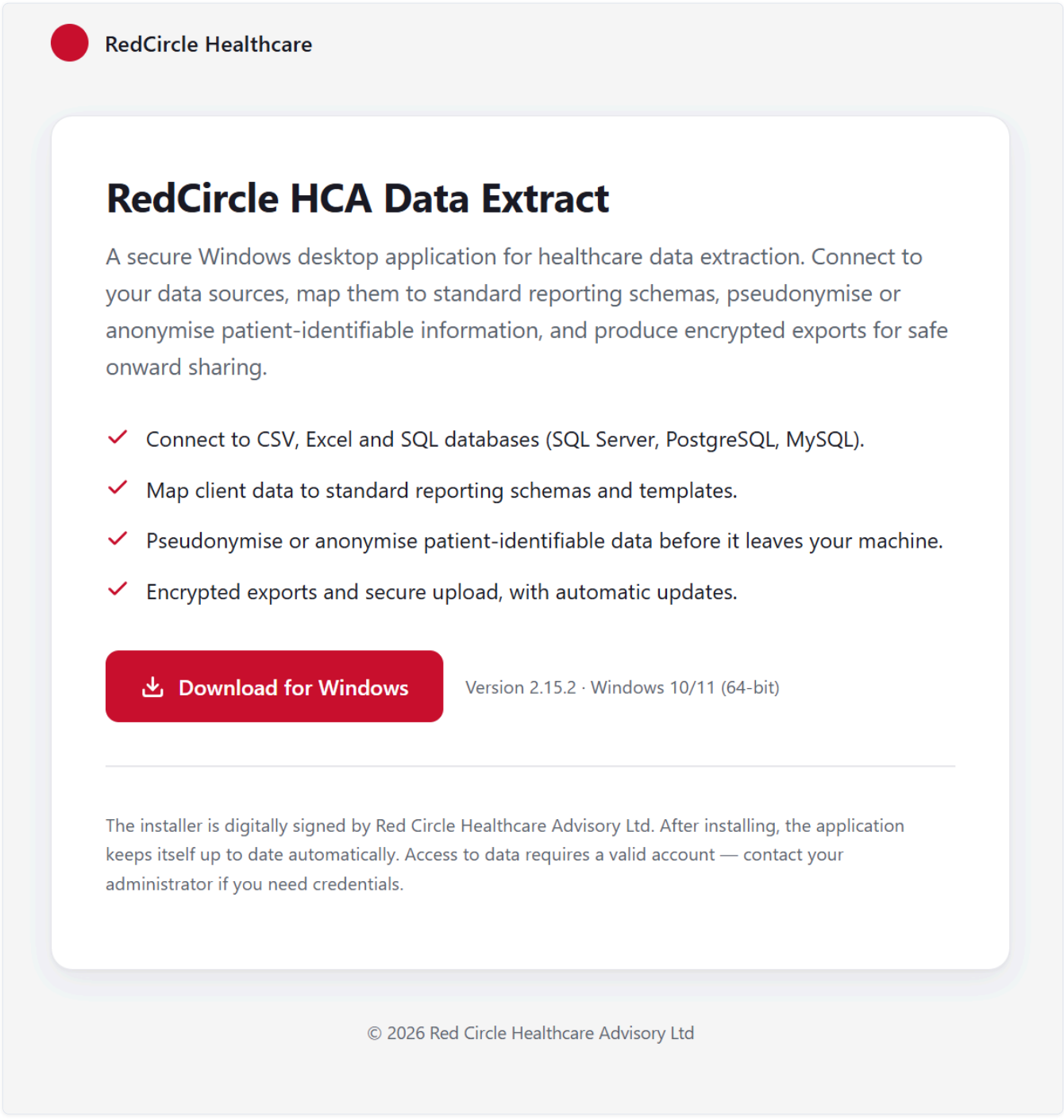
3. Installing the application

1. **Download the installer** from the RedCircle download site:

   https://dataextract.redcircleai.com/

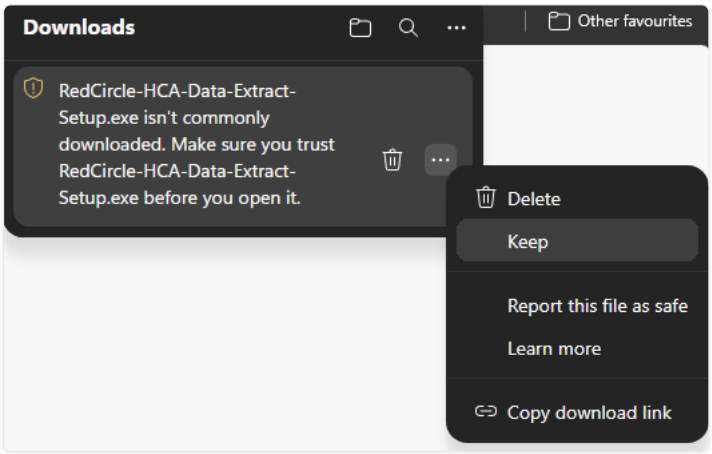
   The file is named after the version you are downloading:

   ```
   RedCircle-HCA-Data-Extract-Setup-2.25.0.exe
   ```



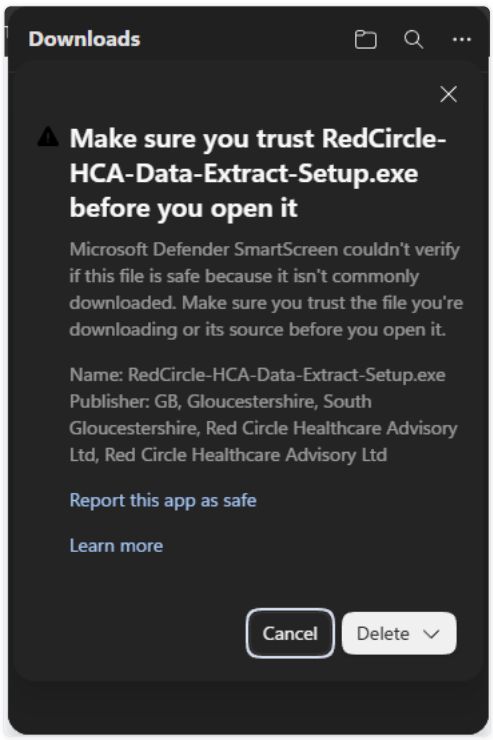
The RedCircle download site

2. **Double-click the installer.** Because it installs for your user account only, you will **not** be asked for administrator rights.
3. **If your browser warns that the file "isn't commonly downloaded",** this is normal for newly released software and does not mean anything is wrong. In Microsoft Edge, click the ⋯ (more) button next to the download and choose **Keep**.



The browser "isn't commonly downloaded" warning — click the ··· menu and choose Keep

If a further **"Make sure you trust…"** prompt appears, note that it shows the **verified publisher — Red Circle Healthcare Advisory Ltd** — confirming the installer is genuinely signed by RedCircle. Choose to keep and open the file. (In other browsers, or if the Windows SmartScreen prompt appears when you run the installer, click **More info** → **Run anyway**.) This reputation warning fades as more people install the same version.



The SmartScreen prompt showing the verified publisher, Red Circle Healthcare Advisory Ltd

4. **Follow the prompts.** The installer places the application in your user profile and creates a **RedCircle HCA Data Extract** entry in the Start Menu. If the WebView2 runtime is missing, it is downloaded and installed automatically at this stage.
5. **Launch the app** from the Start Menu.

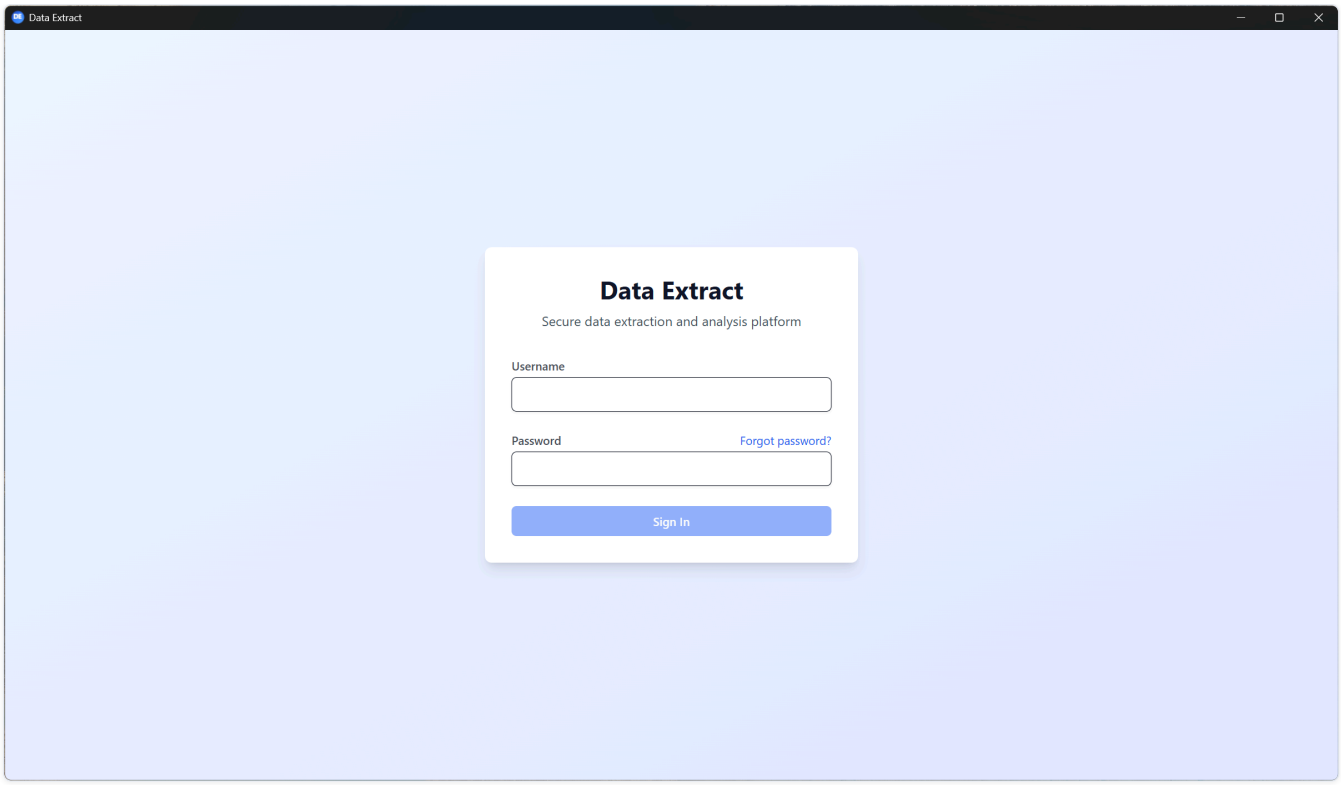
> **Note on signatures:** The installer, the installed program file (`app.exe`) and the uninstaller are all digitally signed by *Red Circle Healthcare Advisory Ltd*, so an organisation that controls which programs may run can approve the application by publisher.

> **For IT teams:** the download page also offers a **per-machine MSI**, which installs into `C:\Program Files` for all users and can be deployed silently with Intune, SCCM or Group Policy — the right choice for shared machines and VDI, where an install inside a user profile is lost when the machine is reset. See IT_DEPLOYMENT.md.

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4. First launch & signing in

The application opens to the **Data Extract** sign-in screen ("Secure data extraction and analysis platform"). Access is controlled by RedCircle.



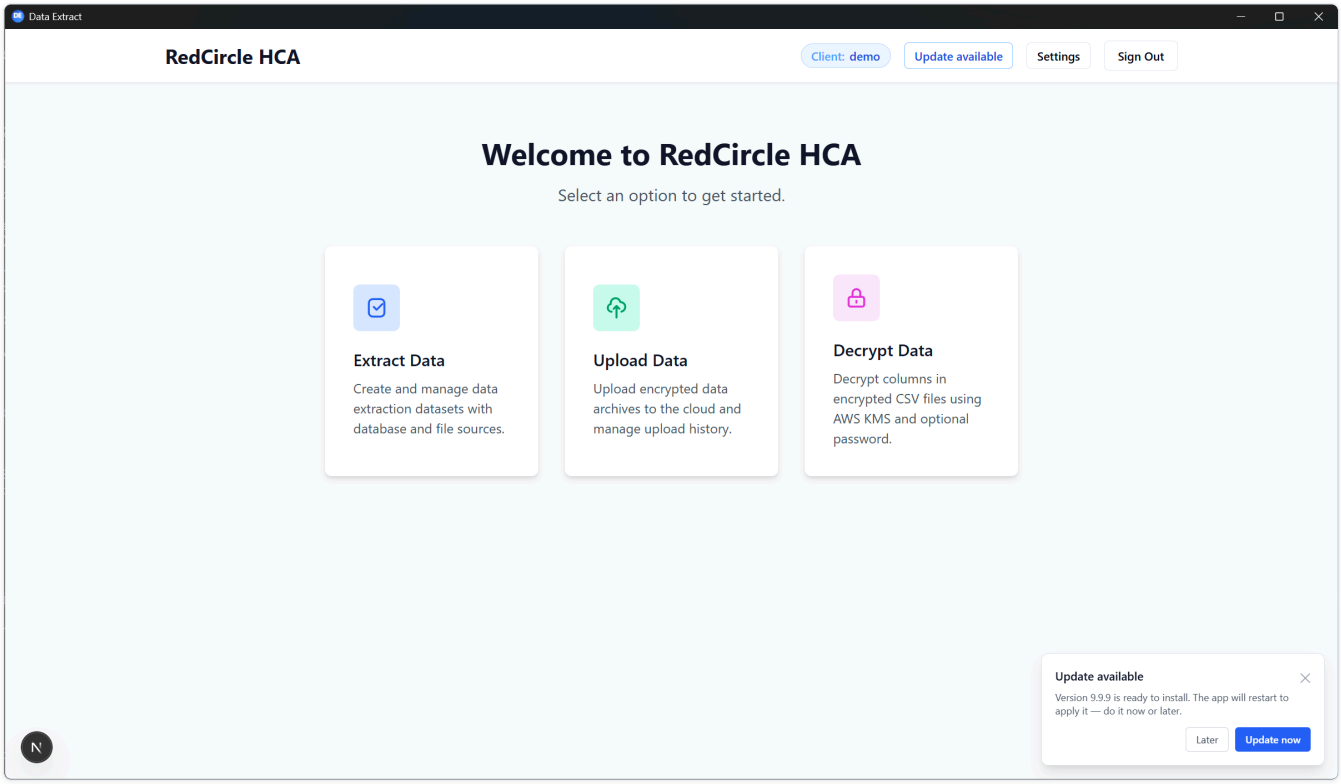
The Data Extract sign-in screen

- **Sign in with your username (your email address) and password.** Your account is provided by a RedCircle administrator — there is no self-service sign-up.
- **First-time sign-in:** if your account was newly created, you may be asked to **set a new password**.
- **Multi-factor authentication (MFA):** if MFA is enabled on your account, you will be prompted for a code from your authenticator app (e.g. Google Authenticator).
- **Forgotten password:** use the reset option on the sign-in screen.

Select a client. After signing in, if your account has access to more than one client, you choose which **client** to work under. (Most users only have one client and will not see this step.) The active client is shown as a badge in the header throughout the app, and it scopes which datasets you see. You can switch clients later from the header — the badge carries a **Switch** control for accounts linked to more than one client.

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5. The home screen



The home screen with the three main options

The home screen header reads **RedCircle HCA** and shows your current client badge, a **Settings** button (see section 14), a **Sign Out** button, and — when a newer version is available — an **Update available** button (see section 15). Three options are presented:

- **Extract Data** — create and manage datasets from database and file sources. *This is the main workflow and where most of this guide focuses.*
- **Upload Data** — upload encrypted data archives to the cloud and review upload history.
- **Decrypt Data** — decrypt columns in an encrypted CSV file (using AWS KMS and, if used, your password).

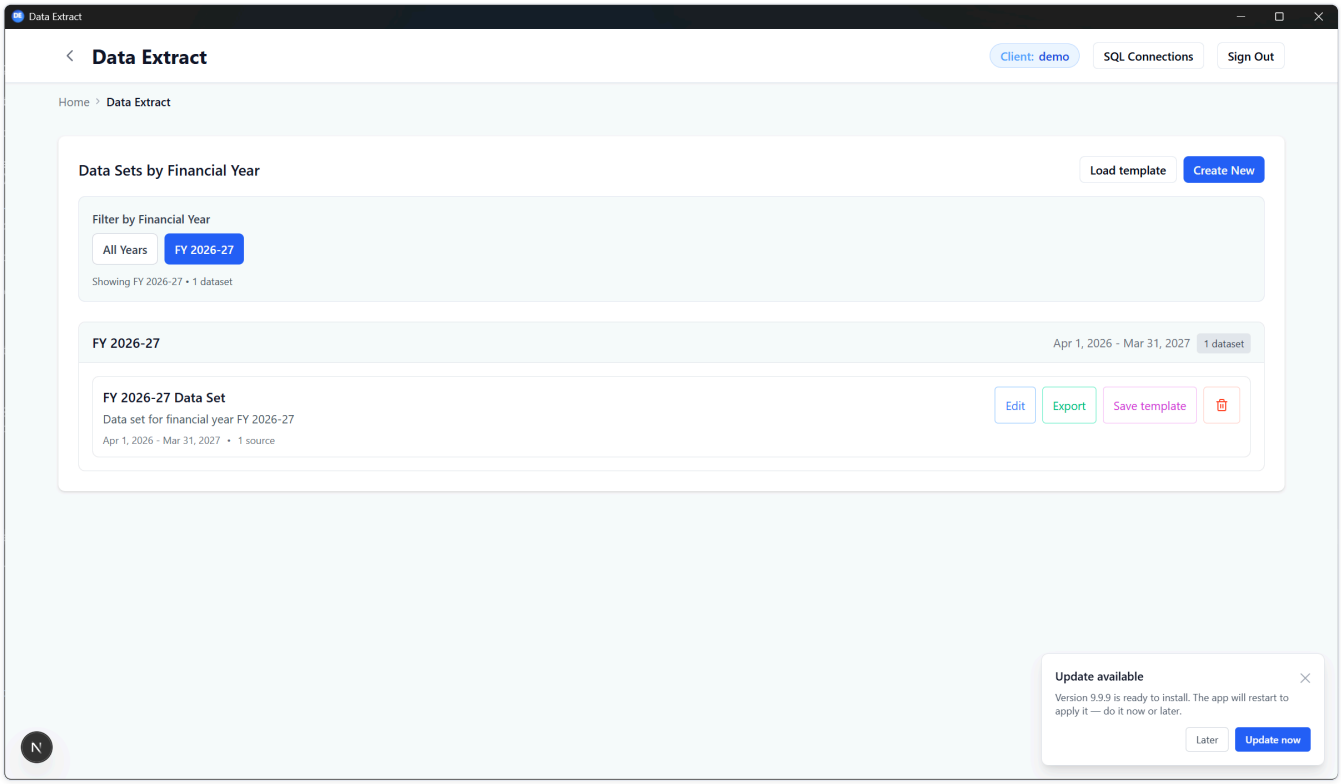
Click **Extract Data** to begin.

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6. Working with datasets

A **dataset** is a named collection of data sources for a reporting period (for example, a financial year's activity feeds).

The datasets list



The datasets list, grouped by financial year

On the **Data Extract** screen, datasets are grouped by **UK financial year**. Use the year dropdown to filter. The header offers **SQL Connections** — manage reusable database connections (see section 8) — and **Sign Out**. (**Settings** and the **Update available** button live on the home screen header — see sections 14 and 15.)

Each dataset card provides an **Export** action (see section 12) and a **Report** action that saves a PDF describing the dataset's sources and protection (see Data set report). If a shared template folder is configured, the card also offers **Save template** and the header shows **Load template** (see section 16).

Creating and editing a dataset

1. Create a new dataset and open it. The dataset detail screen shows its name and reporting period.
2. Use **Edit Details** to set the **Name**, **Description**, **Period Start**, and **Period End** dates. The period drives the date filtering described in section 10.
3. Use **Save Changes** (or **Save & Go Back**) to keep your edits. **Delete** removes the dataset. **Export** in the same header opens the export dialog described in section 12, so you don't need to go back to the list.

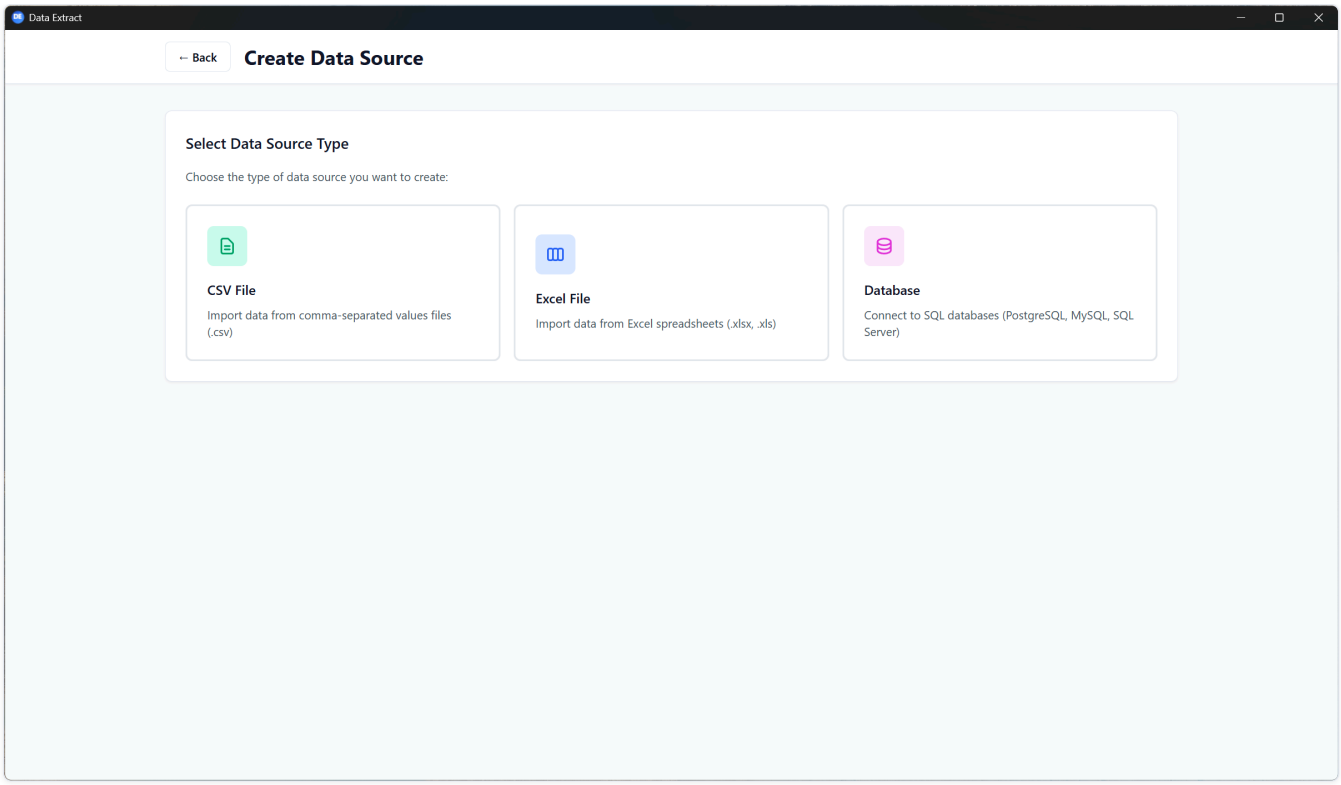
The body of the dataset screen is the **Data Sources** area, with **Add Source** and **New Group** buttons.

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7. Adding data sources

Click **Add Source** and choose a type on the **Select Data Source Type** screen:

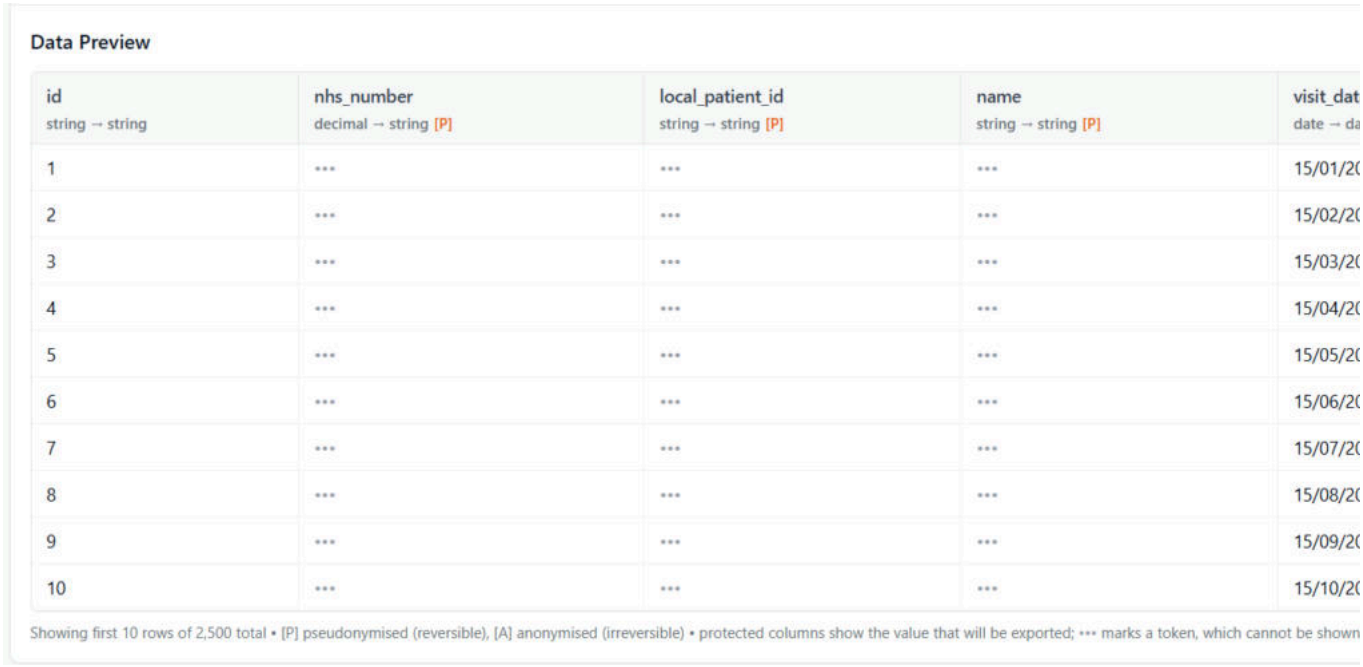
- **CSV File** (`.csv`)
- **Excel File** (`.xlsx` , `.xls`)
- **Database** (PostgreSQL, MySQL, SQL Server)



Choosing a data source type

Every source editor has:

- A **Basic Information** block — **Data Source Name** and an **Active** checkbox (inactive sources are skipped on export).
- A **Preview Data** button — reads live from your actual file or database so you can confirm the configuration before exporting. Under the preview, the total says how many rows the source holds:
  - **Excel and most CSV files:** the exact total appears with the preview.
  - **CSV files over 50 MB:** an estimate (shown as "about …") appears first. The exact figure replaces it once the file has been counted, typically a few seconds per GB.
  - **Database tables:** the total reads "counting rows…" (or the database's own approximate figure) until an exact count arrives. The count gives up after 30 seconds and then shows "total unavailable".
  - **Custom SQL queries:** these aren't counted automatically, because counting one can take as long as running it. Click **Count rows** if you want the total.



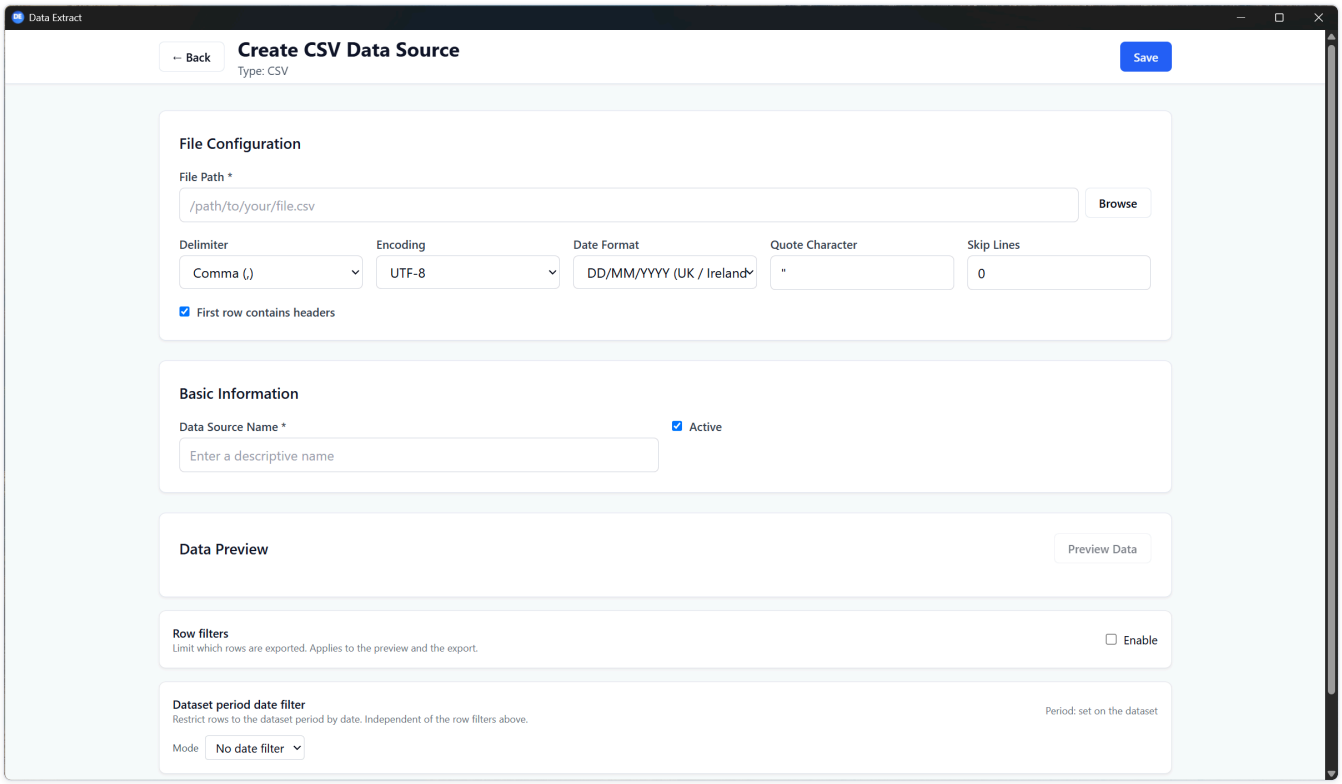
The preview, with the total row count underneath and protected columns shown as tokens

With a row filter switched on, the total says "matching the filter".

- A **Row filters** section (see section 10).
- A **Column Configuration** table (see section 9).

Use **Save** in the sticky header when you are done.

CSV files



Configuring a CSV data source

In **File Configuration**:

- **File Path** — click **Browse** to select the file. The source name and the delimiter/header settings are auto-detected on selection.
- **Delimiter** — Comma, Semicolon, Tab, or Pipe.
- **Encoding** — UTF-8, UTF-16, ISO-8859-1, or Windows-1252.
- **Date Format** — DD/MM/YYYY (UK / Ireland), YYYY-MM-DD (ISO), MM/DD/YYYY (US), or Auto-detect. **Choose the UK format for UK data** to avoid ambiguous dates being misread.
- **Quote Character**, **Skip Lines**, and **First row contains headers**.

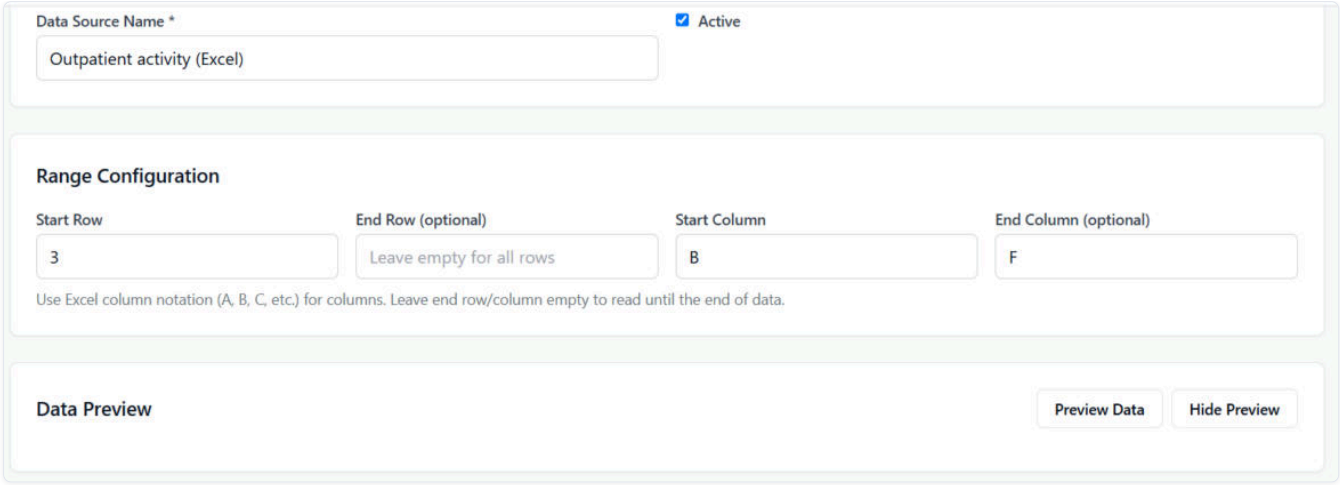
Excel files

In **File Configuration**: **File Path** + **Browse**, **Sheet Name** (use **Load Sheets** to list them), and **First row contains headers**.

In **Range Configuration**: **Start Row**, **End Row** (optional), **Start Column** and **End Column** in A/B/C notation. Leaving end row/column empty reads to the end of the data.

Use the range when a sheet has title rows above the table, or columns you don't want:

- **Start Row** is the row holding the column headings. Anything above it, such as a report title or a "Generated on" line, is skipped.
- **Start Column** and **End Column** limit the export to the columns between them. Columns outside the range are left out completely.



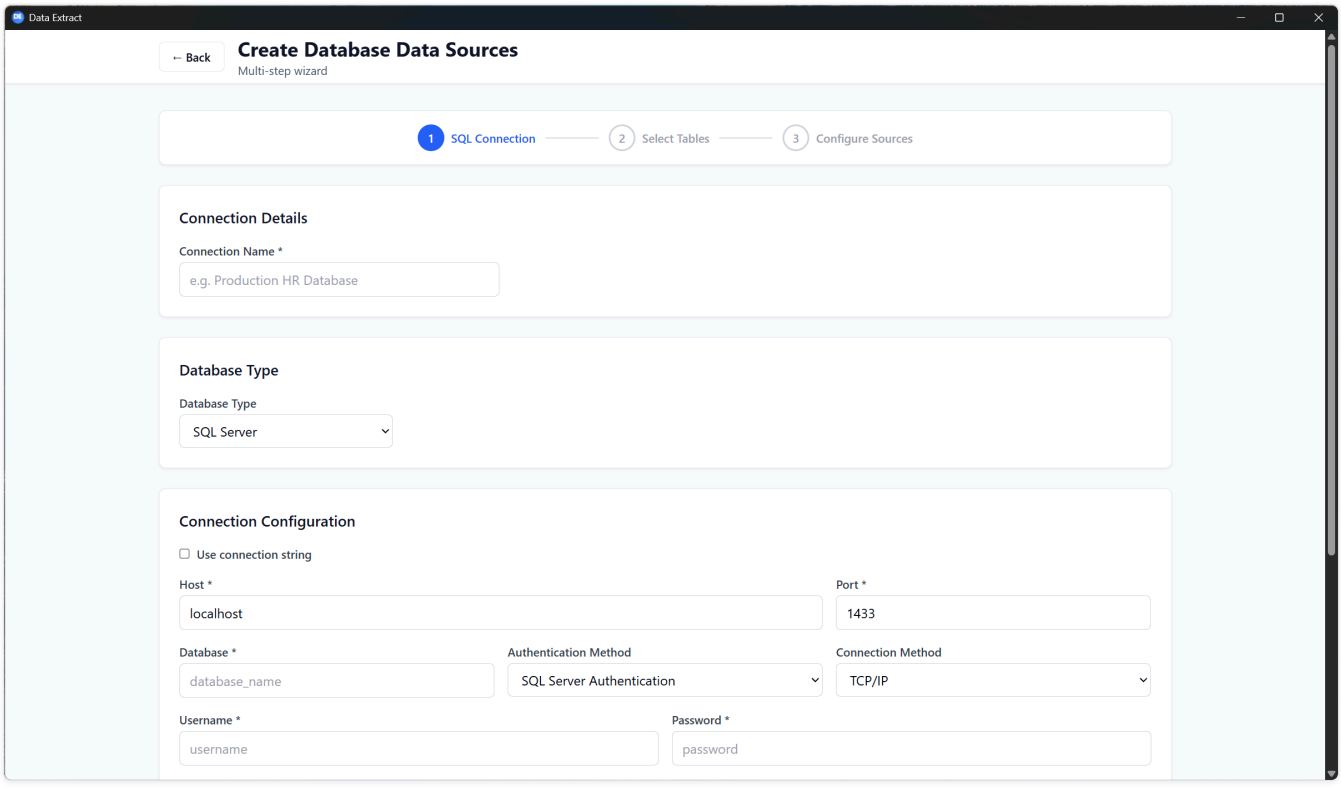
An Excel source whose headings are on row 3, exporting only columns B to F

The export uses exactly the same range and column names as the preview, so what you see in the preview is what you get.

Rows and columns use Excel's own numbering, so **Start Row** 3 and **Start Column** B mean cell B3 even when the sheet has blank rows above the table or an empty column A. A source saved by a version before 2.25.0 keeps the older counting, from the first cell of the sheet that has anything in it, until you edit one of its range fields; the editor shows a note while that is the case, so nothing you have already set up moves.

> **Fixed in 2.23.0.** Earlier versions applied the range to the preview only. The export took its headings from the top row of the sheet and read every column, so on a sheet with title rows the columns you had set up came out **empty**, and the title rows were exported as data. Sheets without a header row had the same problem. If you had worked around this, for example by deleting title rows from the file before exporting, that's no longer needed.

Databases



Configuring a database data source

You can connect two ways:

- **Linked connection (recommended):** choose an **Active Connection** from your saved SQL connections. A read-only summary shows the type, host, database, and schema, with a **Test Connection** button.
- **Inline connection:** fill in the connection details directly — **Database Type**, host/port (or a connection string), **Database**, **Authentication Method**, **Username/Password**, **Schema**, **SSL Mode**, and **Timeout**. Use **Test Connection** to confirm it works (green = success, red = failure).

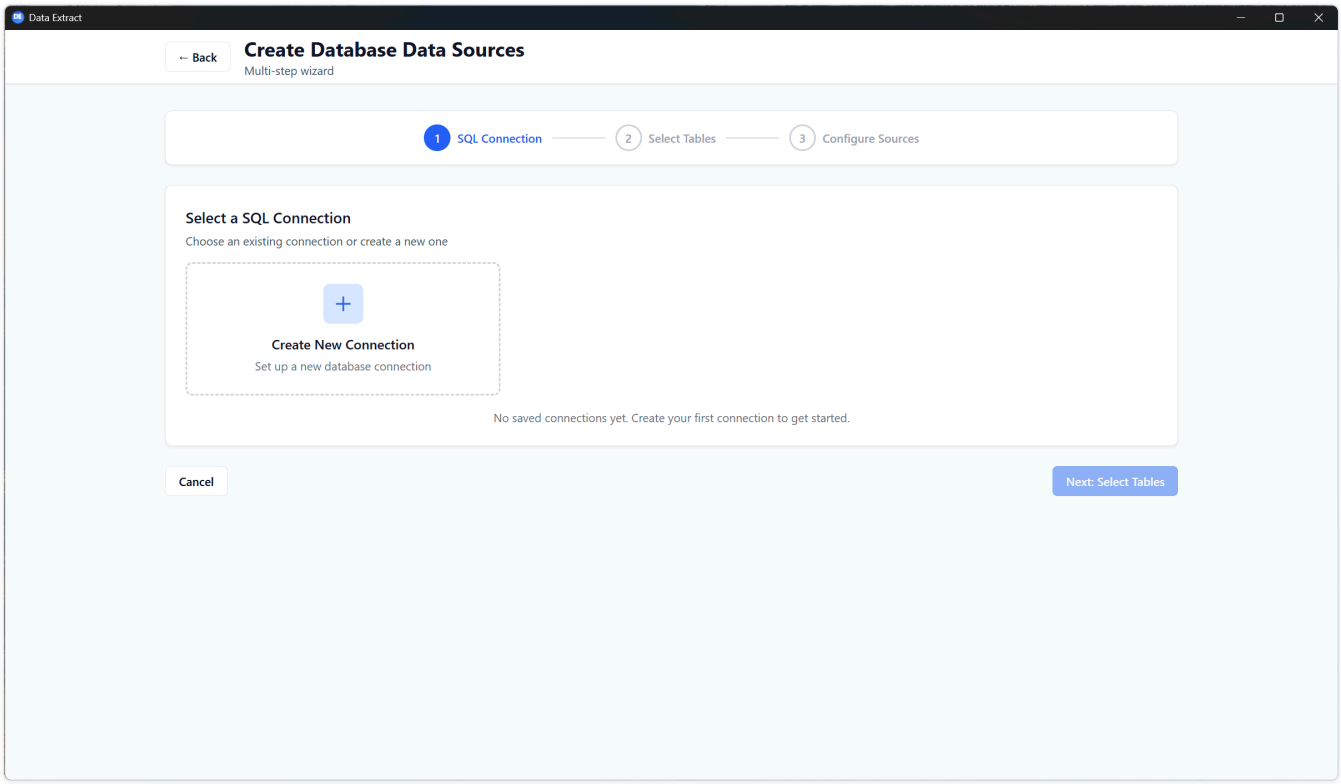
In **Data Source Configuration**, either:

- Enter a **Table Name** (use **Load Tables** to pick from a list), or
- Turn on **Use custom SQL query** and write your own **SQL Query**.

Use **Preview Data** to verify the result.

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8. Saved SQL connections



The saved SQL connections screen

Open **SQL Connections** from the Data Extract header to manage reusable database connections that any data source can link to — so you enter credentials once.

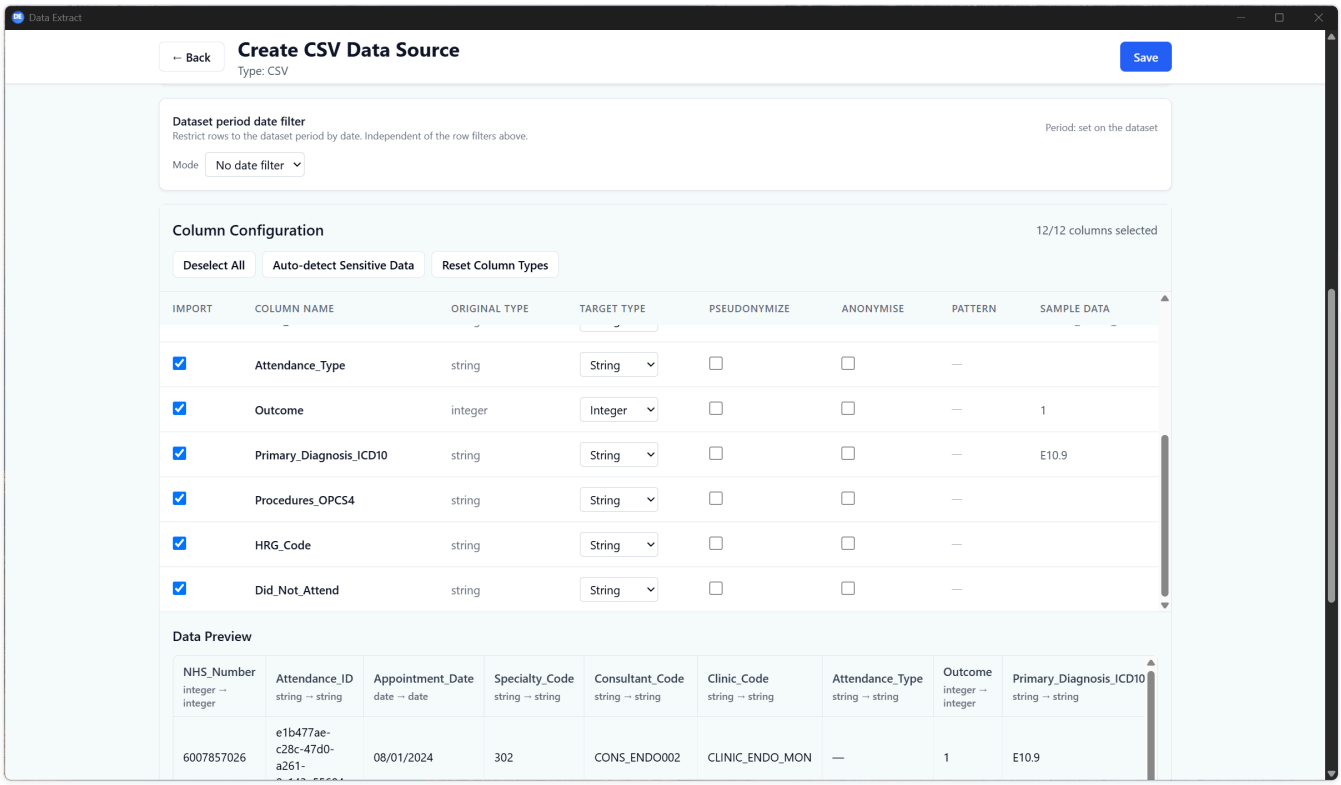
- **New Connection** creates one; each connection stores its name, database type, host/port, database, and schema.
- Each card shows a pass/fail indicator from its last test and offers **Edit** and **Delete**.

Linking sources to a saved connection is preferred over entering connection details on each source individually.

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9. Column configuration & protecting sensitive data

The **Column Configuration** table in each source editor controls which columns are exported and how patient-identifiable information is protected. This is the most important step for data safety.



The column configuration table

Column controls

For each column you have: an **Import** checkbox (include this column?), the **Original Type**, a **Target Type** dropdown, **Sample Data**, and the protection options below. A summary line shows how many columns are selected, pseudonymized, and anonymised.

Header actions:

- **Select All / Deselect All**
- **Auto-detect Sensitive Data**
- **Reset Column Types**

Auto-detect Sensitive Data

This scans the **actual sample values** (not just column names) to find patient-identifiable data. It then flags matches automatically:

- **Direct identifiers** (NHS number, MRN, names) are set to **Pseudonymize**. NHS number columns get the **NHS number** pattern, and MRN, hospital, case note and PAS number columns get **Local patient ID** (see NHS numbers and local patient IDs).
- **Quasi-identifiers** (dates, postcodes, etc.) are set to **Anonymise**, with a suggested pattern pre-filled for you to confirm.

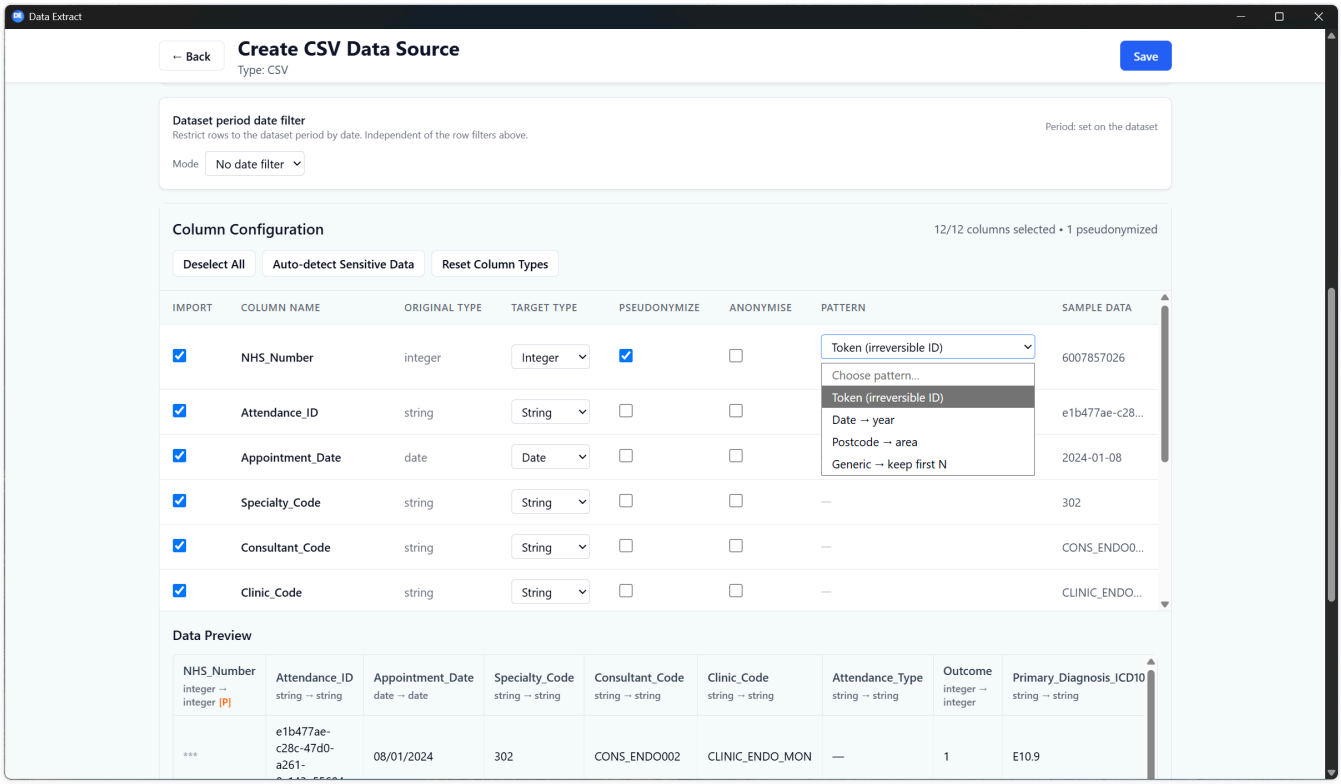
Always review the auto-detected results before exporting.

Pseudonymize vs. Anonymise

Each column can be **Pseudonymize** or **Anonymise** (they are mutually exclusive):

- **Pseudonymize** replaces the value with a protected token, and the original can be recovered later via decryption if you hold the key/password. Use for identifiers you may need to reverse.
- **Anonymise** irreversibly reduces the value using a **pattern**. Use when the original should never be recoverable.

Anonymisation patterns



Choosing an anonymisation pattern

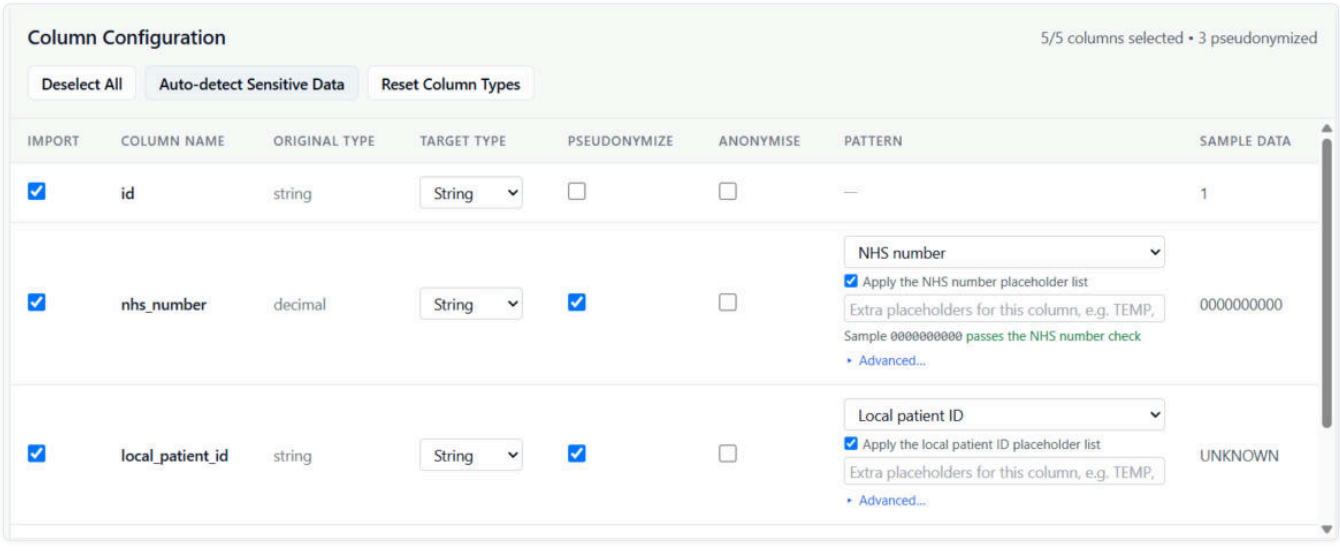
When anonymising, choose a pattern:

- **Token (irreversible ID)** — turns a direct identifier (a name, or any other identifier) into an irreversible token.
- **NHS number** and **Local patient ID** — tokens for patient identifiers that also recognise dummy values and, for NHS numbers, check the number is genuine. See NHS numbers and local patient IDs below.
- **Date → year** — keep just the **Year** (e.g. `1972`) or **Year-month** (`1972-03`).
- **Postcode → area** — keep the **Area** (`SW`), **District** (`SW1A`), or **Sector** (`SW1A 2`).
- **Generic → keep first N** — keep a prefix of a chosen length and mask the rest.

There are also **cleaning steps** (no regular expressions required), applied to a value in order before it is tokenised. The column table shows a one-line summary of the steps and an **Edit cleaning steps** link opens the editor. Each step can remove or keep the first *N* characters, remove or keep the last *N*, keep *N* characters from a position, or remove a prefix or suffix that matches exact text or a shape (Letter / Number / Any). Steps can be reordered, and the sample value is shown after each one, so you can see what the column looks like at every stage.

NHS numbers and local patient IDs

Patient identifier columns have two patterns of their own. They work like **Token**: the same patient always gets the same token, so records can still be linked. They also deal with two problems that a plain token can't see.



The NHS number and Local patient ID patterns, with their placeholder switches

Dummy values (placeholders). Source systems often fill the field with a stand-in when they have no real identifier, such as `0000000000`, `9999999999`, `UNKNOWN` or `N/A`. Tokenised as normal, every one of those rows would look like the **same patient**. These patterns recognise placeholders and export them as a *placeholder* instead of a token, so they never get linked together.

- **Apply the … placeholder list** uses the list kept in **Settings → Identifier placeholders** (see section 14). Leave it on unless you have a reason not to.
- **Extra placeholders for this column** adds values that only this source uses, for example `TEMP` or `123`. Separate them with commas.

Checking NHS numbers. The **NHS number** pattern also runs the standard NHS number check (the Modulus 11 check digit) on every value:

- Spaces, dashes and an "NHS", "NHS No" or "NHS Number" label are ignored, so `943 476 5919`, `943-476-5919` and `NHS 9434765919` are treated as the same number.
- A number that **fails** the check is still protected and exported, because it usually belongs to a real person with a typing mistake in it. It is **flagged as invalid** so the receiving system can decide what to do with it.
- Under the pattern, the app shows whether the column's sample value passes the check.

Blank cells are always exported as empty, whichever pattern you use.

How protected columns appear in the export

A protected column **never appears under its original name**. The suffix is what tells the receiving system the value has been changed, and how. In CSV each role becomes its own column named `<column>_<role>`; in NDJSON the same roles are keys nested under the original column name.

Setting	Pattern	Columns produced
Pseudonymize	Token	`_hash`, `_encrypted`, `_anonymized`
Pseudonymize	NHS number	`_hash`, `_encrypted`, `_anonymized`, `_valid`, `_placeholder`
Pseudonymize	Local patient ID	`_hash`, `_encrypted`, `_anonymized`, `_placeholder`
Pseudonymize	Date / Postcode / Generic	`_anonymized`, `_encrypted`
Anonymise	Token	`_hash`, `_anonymized`
Anonymise	NHS number	`_hash`, `_anonymized`, `_valid`, `_placeholder`
Anonymise	Local patient ID	`_hash`, `_anonymized`, `_placeholder`
Anonymise	Date / Postcode / Generic	`_anonymized`

- `_anonymized` — the protected value to display or report on: a short friendly alias for token patterns, or the shortened value (`1972`, `SW1A`) for the others.
- `_hash` — a stable token for matching the same individual across files.
- `_encrypted` — the original value, recoverable only by a recipient holding the dataset key. Produced for **Pseudonymize** only; anonymised values are never recoverable.
- `_valid` — NHS number only: `true` if the number passes the NHS number check, `false` if it doesn't. An invalid number is still tokenised as normal.
- `_placeholder` — `true` when the value was a dummy such as `0000000000` or `UNKNOWN`. A placeholder row has **no** hash, encrypted value or alias, so placeholders are never matched to each other or to a real patient.

What each kind of NHS number value looks like in the export:

Value in the source	`_hash` / `_encrypted` / `_anonymized`	`_valid`	`_placeholder`
A real number that passes the check	filled in	`true`	empty
A number that fails the check	filled in	`false`	empty
A placeholder, e.g. `0000000000`	empty	empty	`true`
Blank	empty	empty	empty

In NDJSON the same information sits inside the column's object, for example `"nhs_number": {"hash": "…", "encrypted": "…", "anonymized": "…", "valid": false}`. A placeholder is `{"hash": null, "encrypted": null, "anonymized": null, "placeholder": true}`, and a blank value is `null`.

The `schema.json` included with an export states, for each column, which setting and pattern were used and which of these it produces, so the receiving system does not have to work it out from the data. For NHS number and Local patient ID columns it also lists the placeholder values that export applied, and how many values were valid, invalid, placeholders and blank.

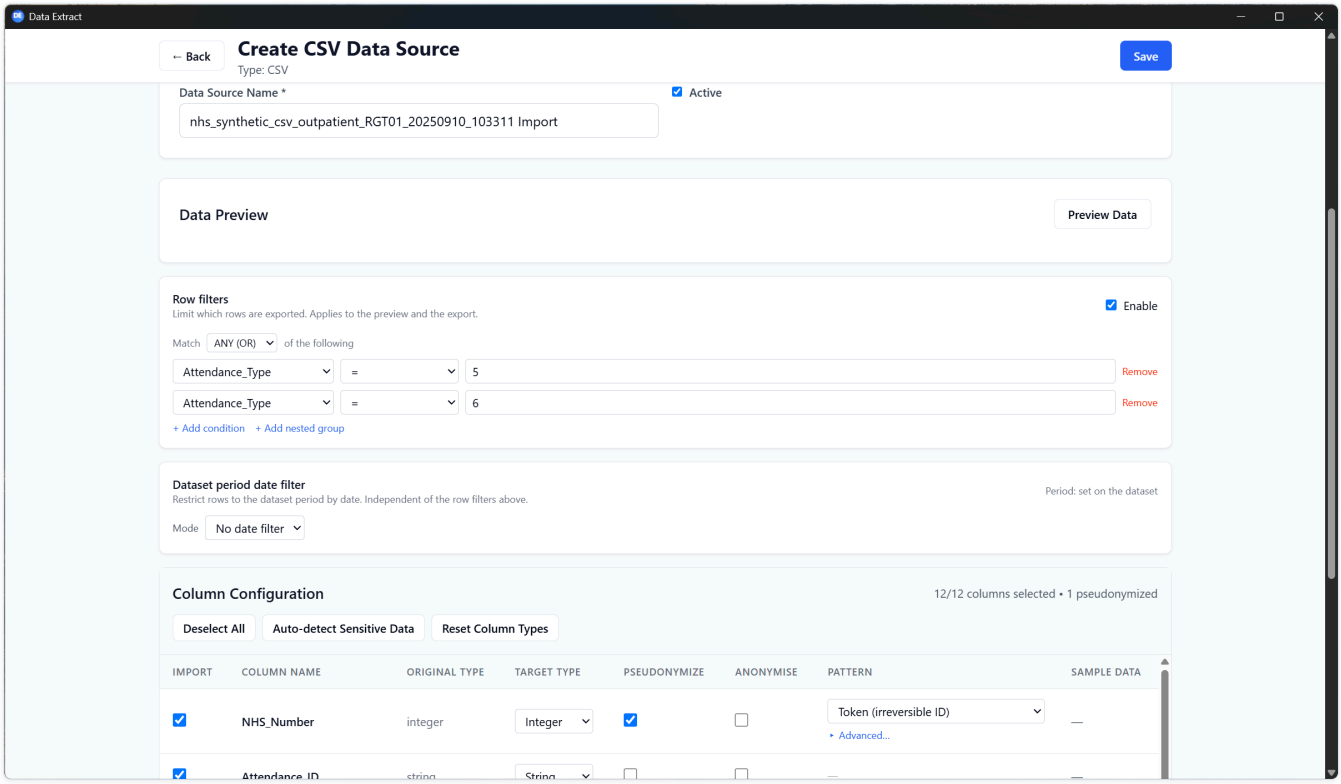
> **Changed in 2.19.0 — action for receiving systems.** Before this version, the Date, Postcode and Generic patterns wrote their shortened value under the *original* column name, so `SW1A` was indistinguishable from a real postcode. Anything reading these exports by column name must be updated. Each export carries a `columnContractVersion` so old and new files can be told apart.

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10. Filters

Filters let you export only the rows you want. They appear inside every source editor (**Row filters**) and in the **Filters** tab of a data source group. There are two independent blocks.

Row filters



Building row filters

Turn on **Enable**, then build a condition tree:

- Match **ALL (AND)** or **ANY (OR)** of the conditions; you can nest groups with **+ Add nested group**.
- Operators: `=`, `≠`, contains, does not contain, `>`, `≥`, `<`, `≤`, in list, not in list, is blank, is not blank.
- The value input adapts to the operator (single value, or a comma-separated list for "in list").

Row filters apply to both the preview and the export. With a filter on, the preview total counts the source rows that **match the filter**. Daily expansion can turn one source row into several output rows, so the export's row count can be higher.

Dataset period date filter

This uses the reporting period you set on the dataset. Choose a **Mode**:

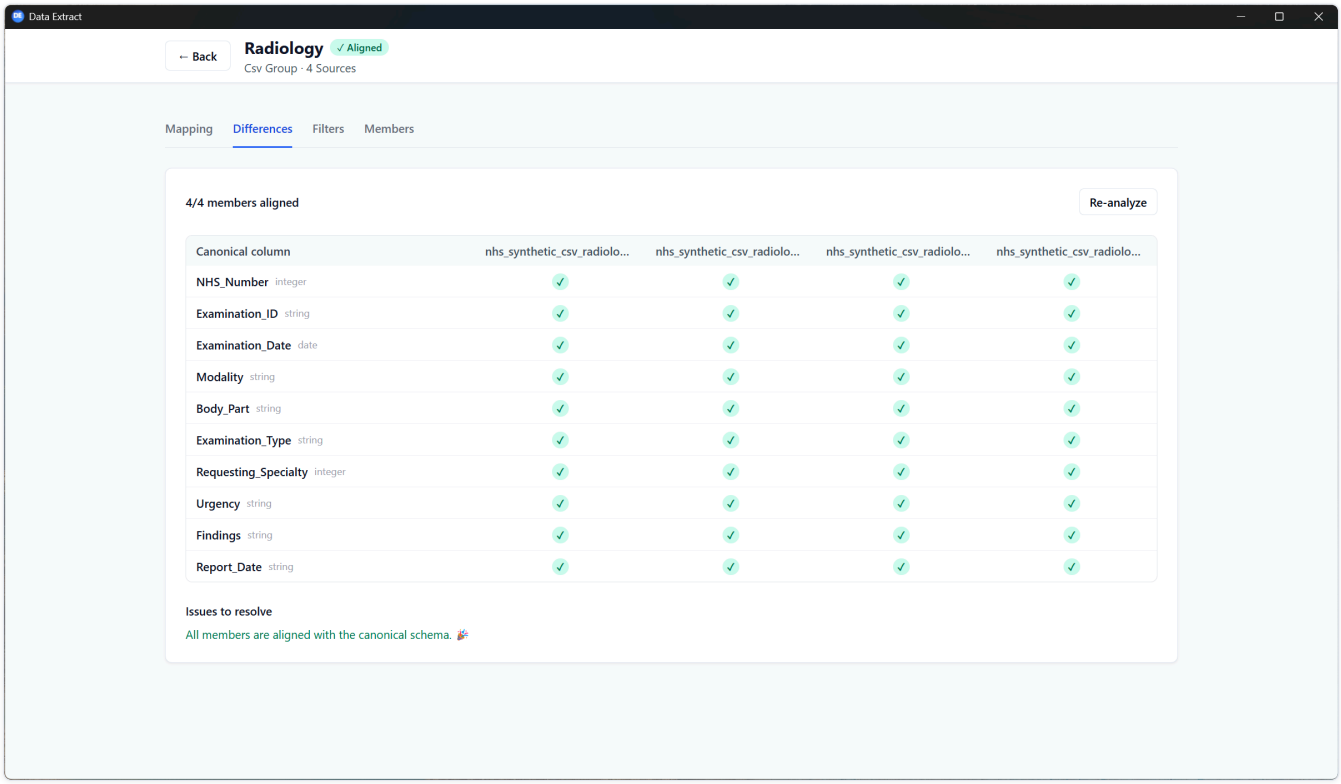
- **No date filter.**
- **Single date** — pick a **Date column**; optionally **Allow blank dates**.
- **Date range** — pick a **Start date column** and **End date column**, with options to:
  - **Include work-in-progress** (a blank end date means still open),
  - **Add coverage columns** (record how much of the period each row covers),
  - **Expand to daily records** (one row per day the record itself spans, with an optional clamp to the dataset period and configurable column names). If a record's start or end date is in a format the app cannot read, that record is written out once with its day columns left blank, so the unreadable value is visible in the export rather than silently spreading the record across the whole period.

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11. Data source groups

Groups let you treat many sources of the **same type** (for example, twelve monthly CSV exports) as a single, reconciled dataset with one shared ("canonical") column layout.

Creating a group



A data source group detail view with its tabs

Click **New Group** to open **New Data Source Group**:

- **Group name** (e.g. "CCA Adult Critical Care (monthly)").
- **Members** — tick the sources to include. Selecting one locks the group to that type; other-type sources are greyed out (groups are single-type).
- **Reference source** — its columns seed the canonical schema, and every other member is compared against it. Defaults to the most recent member.
- **+ Create from files** — pick several CSV or Excel files at once and build a whole group in one step (one member per file, auto-mapped). Files must all be the same type.

The group detail tabs

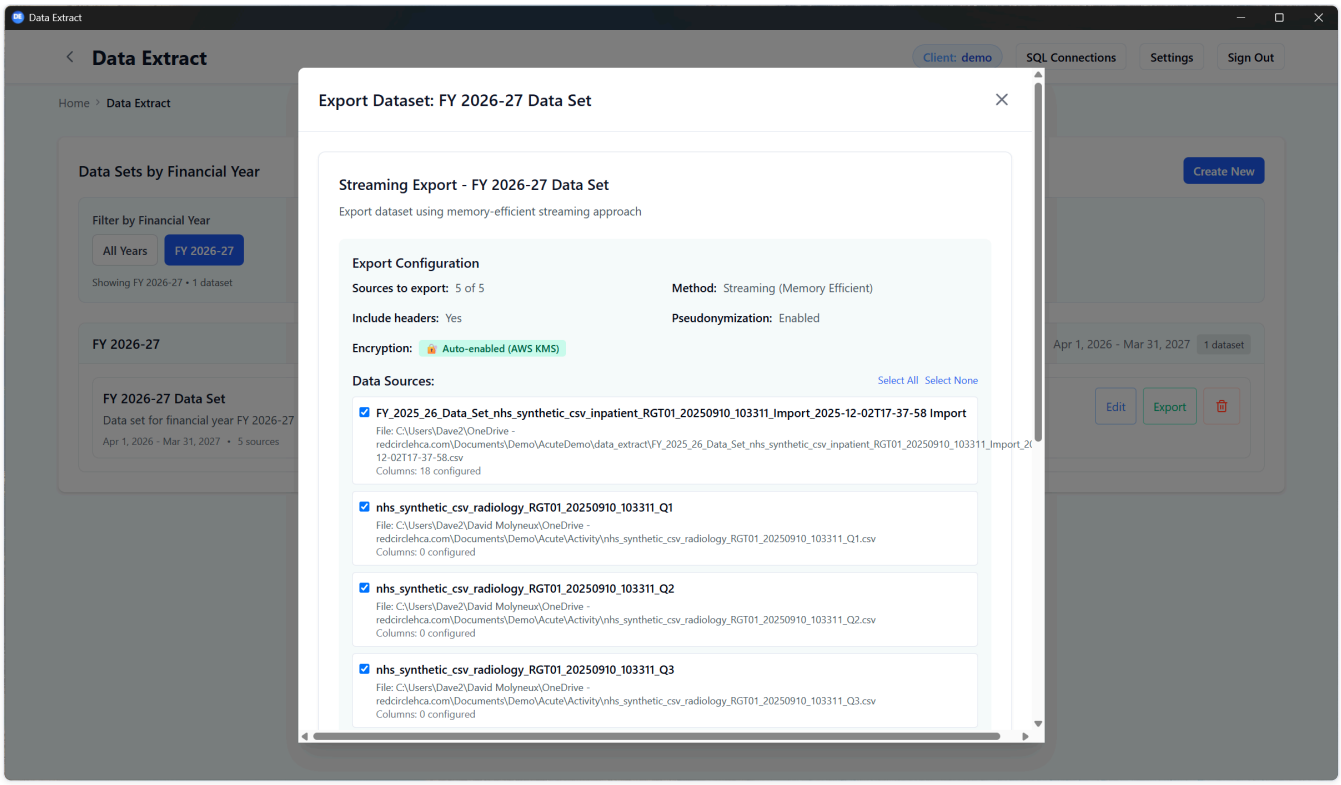
- **Mapping** — defines the canonical column layout. If empty, use **Seed from reference**.
- **Differences** — shows how each member aligns with the canonical layout; a badge counts mismatches. Use **Reanalyze** after changing files.
- **Filters** — row and period filters that target the canonical columns and are resolved to each member's real columns at export.
- **Members** — lists members, marks the reference source, and (for file groups) offers **Re-link file** if a file was moved or renamed.

A health badge in the header summarises how many members are aligned or blocking. At export time, all members are merged and exported together against the canonical layout.

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12. Exporting data

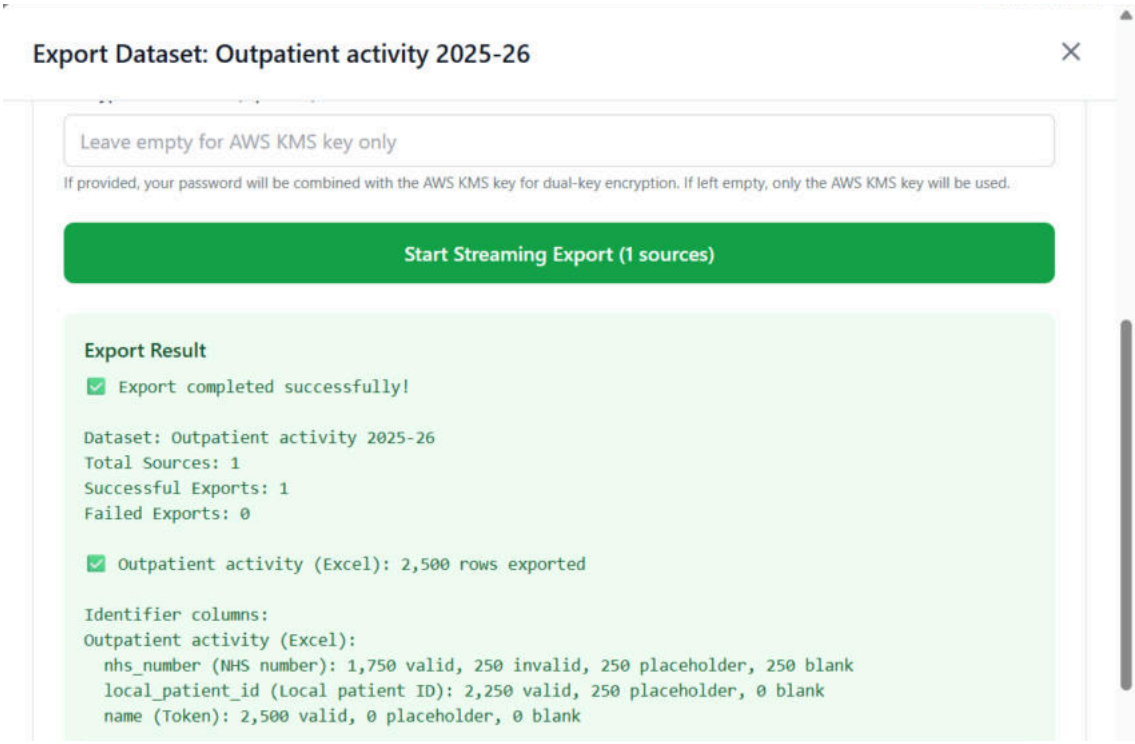
Click **Export** on a dataset card to open the **Export Dataset** dialog. Exporting uses memory-efficient streaming, so it can handle files larger than your available RAM.



The Export Dataset dialog

1. **Review the configuration summary** — number of sources, streaming method, headers included, pseudonymisation status, and the **Encryption** indicator.
2. **Choose which sources to export** — tick sources individually, or use **Select All** / **Select None**. If a selected source has no column configuration yet (for example tables added in bulk), a note says so: the export reads its columns, exports all of them, pseudonymises the ones it detects as patient identifiers and generalises quasi-identifiers, then saves that configuration on the source so you can review it afterwards.
3. **Choose the export format:**
   - **NDJSON** (Newline Delimited JSON) — the default. Protected columns become nested objects. Best for data pipelines and MongoDB imports.
   - **CSV** — protected columns become separate suffixed columns (`_hash` , `_encrypted` , `_anonymized`). Best for spreadsheets.
4. **Encryption password (optional)** — leave empty to encrypt with the AWS KMS key only, or enter a password for **dual-key** encryption (your password *and* the KMS key are both required to decrypt).
5. Click **Start Streaming Export**. A progress bar shows per-source status.
6. **On completion**, a success panel lists the row counts per source (including "input → output" counts when daily expansion added rows) and a clickable link to the **output folder**.

   If any column uses the NHS number, Local patient ID or Token pattern, the panel also has an **Identifier columns** section. It shows, for each of those columns, how many values were valid, invalid, placeholders and blank. It's a quick check before you send the export anywhere: a high invalid or placeholder count usually points to a problem in the source data.



The export result, with the Identifier columns counts

Encryption is enabled automatically whenever any column is pseudonymized. The indicator reads "Not Required" (nothing pseudonymized), "Auto-enabled (AWS KMS)", or "Auto-enabled (Dev Mode)". The KMS key that can unwrap the export is stored with the dataset; keep this in mind — **the export cannot be decrypted without it** (and without your password, if you set one).

If an encrypted archive was produced and cloud upload is configured, an **S3 Upload** panel lets you push the archive straight to the cloud from the success screen.

Data set report (PDF)

Click **Report** on a dataset card to save a PDF that describes the dataset as it is configured: something you can attach to a DPIA or hand to an information governance reviewer without opening the application. It is built from the saved configuration only. It does not connect to any source, reads no rows, and contains no patient data, credentials or key material.

The report has three parts:

1. **Summary** — how many sources and columns the dataset has, how many columns are exported, and how many are pseudonymised, anonymised or generalised. A **protected columns register** lists every protected column across the dataset, whether the same person can be matched across exports, and whether the original value can be recovered.
2. **Data sources** — one section per source (or per group). It shows where the source reads from (server, database and table for a database; file, sheet and range for a spreadsheet), its filters, and a column table: source type, export type, protection, the pattern and options chosen, and the exact column names written to the export. Columns that are not exported are listed struck through. Columns the export adds itself (period coverage, daily expansion, the group source column) are marked **Derived**.
3. **How the protection works** — a fixed explanation of the protection levels, identifier cleaning and placeholders, and the two keys, so the tables can be read without this guide.

Database usernames, passwords and connection strings never appear. A row-filter value compared against a protected column (for example an NHS number) is shown as *[withheld]*.

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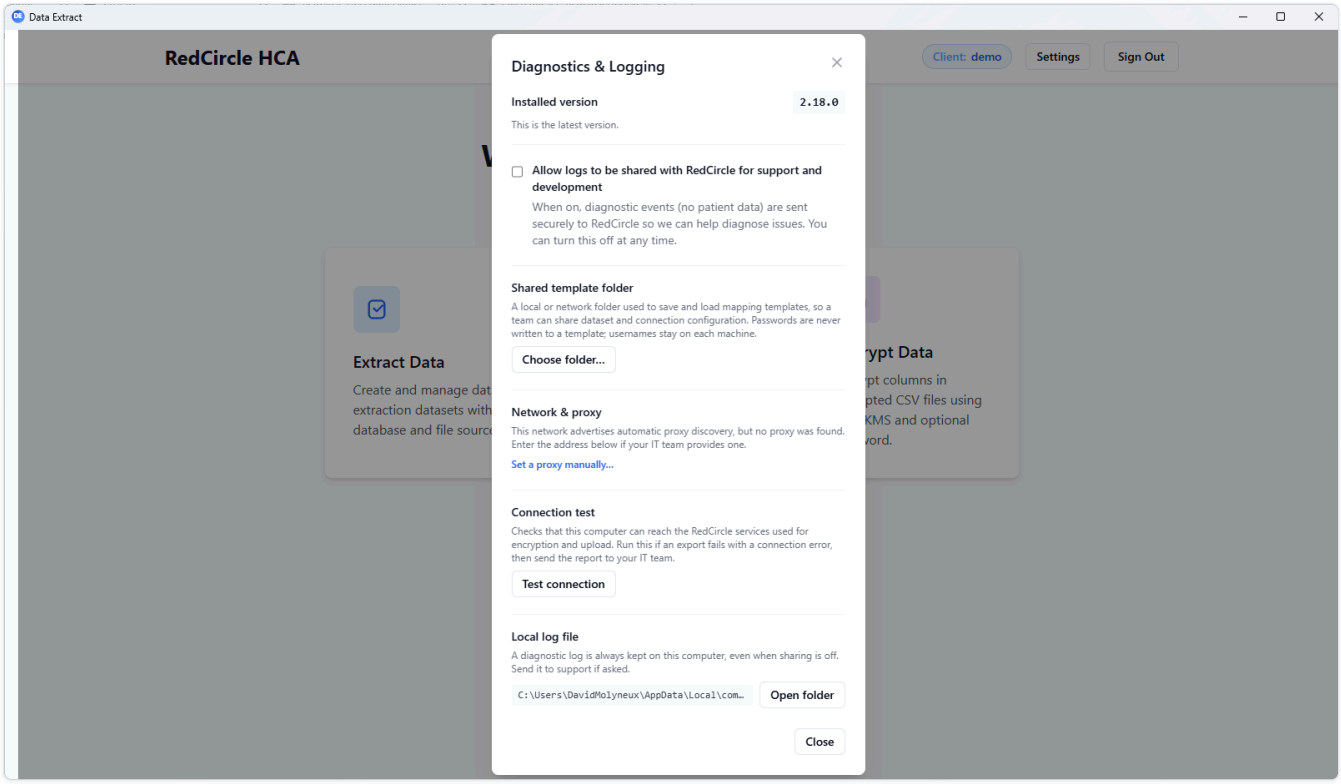
13. Uploading & decrypting data

From the home screen:

- **Upload Data** opens the uploads area, where you can send encrypted archives to the cloud and review your upload history.
- **Decrypt Data** opens the **CSV Decryption** page — the reverse of export. Select an encrypted CSV and decrypt its protected columns using AWS KMS plus your password (if one was set at export time).

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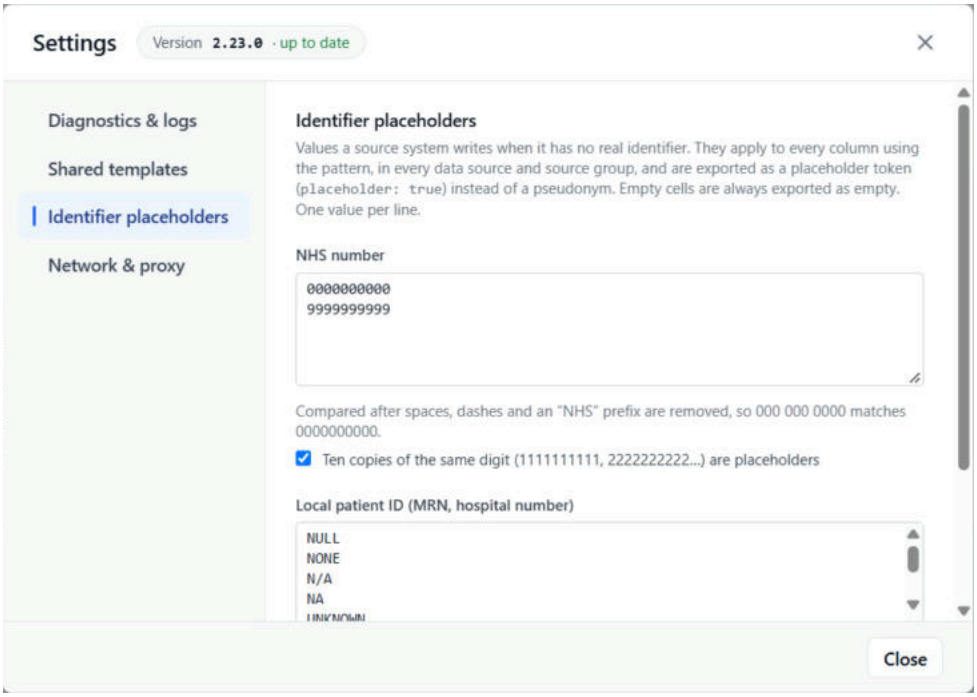
14. Settings, logging & support



The Diagnostics & Logging settings

Open **Settings** (in the home screen header) to reach **Diagnostics & Logging**:

- **Installed version** — shown at the top, this is the version actually running on your computer. Underneath it you will see either *This is the latest version*, or a note that a newer version is available. If support asks "what version are you on?", this is the answer. If it says the update check could not run, your network may be blocking it — use **Test connection** below.
- **Allow logs to be shared with RedCircle for support and development** — when on, diagnostic events (which contain **no patient data**) are sent securely to RedCircle to help with support. You can turn this off at any time; it takes effect immediately.
- **Shared template folder** — choose a local or network folder used to save and load dataset **templates** so a team can share the same configuration (see section 16). Passwords are never written to a template.
- **Identifier placeholders** — the dummy values that the **NHS number** and **Local patient ID** patterns treat as "no real identifier" (see NHS numbers and local patient IDs). There is one list per pattern, one value per line. The lists apply to every data source and group on this computer.
  - **NHS number** starts with `0000000000` and `9999999999`. Both pass the NHS number check, which is why they have to be listed. Spaces, dashes and an "NHS" label are ignored when comparing, so `000 000 0000` matches `0000000000`. **Ten copies of the same digit** (`1111111111`, `2222222222` …) treats all of those as placeholders too.
  - **Local patient ID** starts with `NULL`, `NONE`, `N/A`, `NA`, `UNKNOWN`, `NOT KNOWN`, `-` and `0`. Matching ignores spaces and upper/lower case. **A value made of one repeated character** (`000000`, `XXXXXXX`) treats those as placeholders too.
  - Add any values your source systems use, then click **Save**. **Restore defaults** puts the original lists back. Each export records the lists it used, so changing them later doesn't change what an earlier export meant.



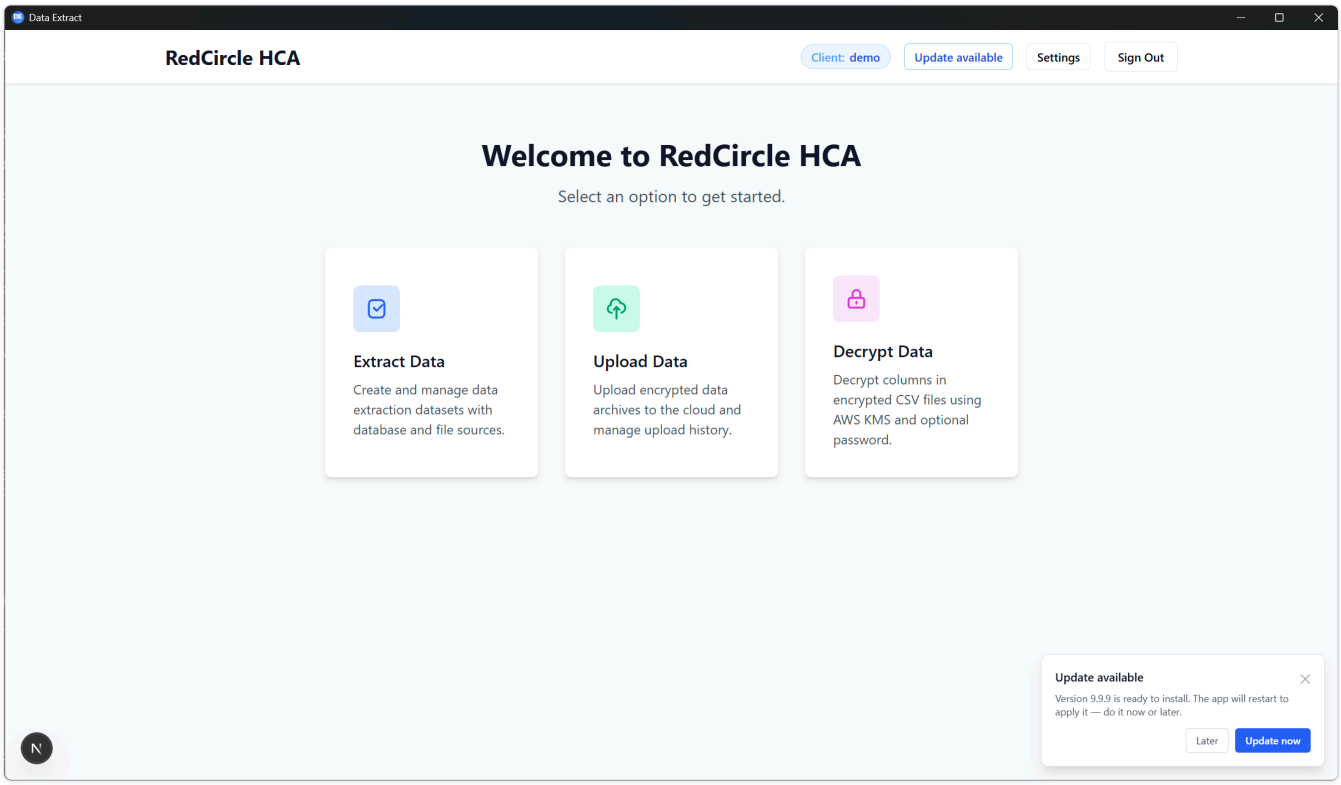
The Identifier placeholders settings

- **Network & proxy** — most people never need to touch this. The application works out how to reach the internet the same way your web browser does, including any proxy your organisation uses. If that is not right for your network, you can enter a **proxy address** here, plus any addresses that should bypass it. Leave it empty to let the computer decide automatically. - **Connection test** — click **Test connection** to check that this computer can reach the RedCircle services used for encryption and upload. Run this first if an export or upload fails with a connection error. If something is blocked, use **Copy report** and send the report to your IT team — it names exactly which address failed and why. - **Local log file** — shows the always-on local log path with an **Open folder** button. A local log is written on your machine **even when sharing is turned off**, so support can ask you to send it if needed. - **Save diagnostic bundle…** — the quickest way to send support what they need. It saves one `.zip` file wherever you choose, containing the log files and a short summary of this installation (version, Windows build, which service address the app is pointed at). It contains **no patient data and no passwords**. Attach it to your support email. - **Enhanced logging (verbose)** — leave this off unless support asks for it. When on, the app records every step it takes in much more detail in the local log file, which helps pin down a problem that the normal log does not explain. Turn it on, reproduce the problem, then save a diagnostic bundle. The extra detail stays on this computer only (it is never shared automatically, even with sharing on), and the setting **switches itself off after 24 hours**.

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15. Automatic updates

The application keeps itself up to date automatically.



The Update available notification, with an Update available button in the header

- When a newer version is available, an **Update available** button appears in the header and a notification slides in from the corner: "*Version X is ready to install. The app will restart to apply it — do it now or later.*"
- Click **Update now** to install it — the app downloads the update and restarts on the new version automatically, with no administrator rights required. Click **Later** to defer; you can start the update from the header **Update available** button whenever you're ready.
- Updates are digitally verified before installing, so a tampered update is rejected. If an update fails, the notification shows the reason and lets you retry.
- Before installing, the app checks that the update can be applied on your machine. On a **locked-down or managed device** it may report that it *isn't ready to update* and describe what your **IT team** needs to allow — in that case the current version is left untouched, so you are never left without a working app. Pass that message to IT and try again once they've made the change.
- From version 2.18.0 the installed application and its uninstaller are **digitally signed** by *Red Circle Healthcare Advisory Ltd*, as well as the installer you download. If your organisation controls which programs may run, this lets IT approve the application **by publisher** rather than having to re-approve each new version.

> **For IT teams:** the application installs per-user into `%LOCALAPPDATA%\RedCircle HCA Data Extract` and needs no administrator rights. Updates replace the files in that folder. If a security policy prevents programs from running there, the update will be stopped before it removes anything and the user will be shown what to pass on to you. Allowing the publisher *Red Circle Healthcare Advisory Ltd* is the most durable approach, since it does not need revisiting at each release.

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16. Sharing templates

A **template** is a saved copy of a dataset's configuration — its data sources, column configuration and protection settings, filters, and any data source groups, together with the details of the SQL connections it uses. Saving a template to a shared folder lets a colleague load the same setup on their own machine, so a mapping only has to be built once for the team.

Passwords and usernames are never written to a template. A template records *which* connection a source uses and all of its non-secret settings, but each person keeps their own sign-in details — see below.

Set the shared folder (once)

In **Settings** → **Shared template folder** (see section 14), choose a **local or network folder** (for example a shared drive) that your team can all reach. The **Save template** and **Load template** actions only appear once this folder is set.

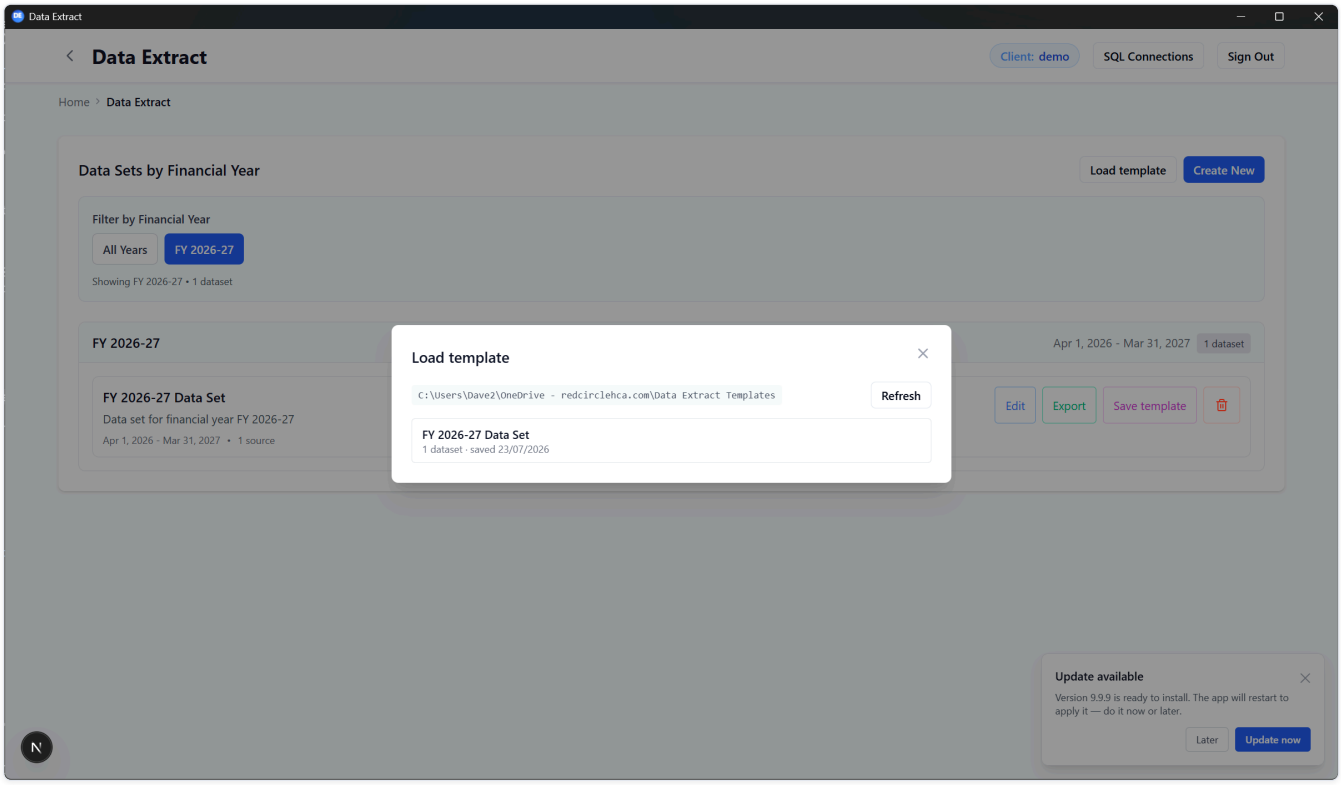
Save a template

On the **Data Extract** screen, each dataset card shows a **Save template** button. Click it to write that dataset's configuration to the shared folder as a template file. Re-saving the same dataset updates its existing template.

If a source uses a **custom SQL query** or a **row filter with typed-in values**, the app warns you before saving, because those can contain identifiers — you can then choose to save or cancel.

Load a template

Click **Load template** in the **Data Extract** header, then pick a template from the folder. Before anything changes, a **preview** shows exactly what will happen:



Loading a template, with the review of what will be added or updated

- **Datasets and connections to be added or updated** — updating replaces your local copy of those items with the template's version.
- **Connections that need credentials** — any new connection is added without a username or password; open it afterwards and enter your own.
- **A different client** — if a dataset in the template belongs to another client, it is flagged (it won't appear until you switch to that client).

Click **Import** to apply it. Connections you already have keep **your** username and password — only the other settings are updated — so a colleague's changes never overwrite your sign-in details.

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17. Where your data is stored

Your source data is never moved by the app — it is only read from where it lives. The application itself stores a few files under your Windows user profile:

Item	Location
Program files	`%LOCALAPPDATA%\RedCircle HCA Data Extract\`
Configuration	`%APPDATA%\com.redcirclehca.dataextract\config.json`
Local log file	`%LOCALAPPDATA%\com.redcirclehca.dataextract\logs\app.log`

The log file rotates automatically at 5 MB (keeping one backup), so it never grows large. While **Enhanced logging** is on it is allowed to reach 20 MB with two backups, so a whole verbose session is kept. You can open its folder from **Settings → Local log file**, or save everything support needs in one go with **Settings → Save diagnostic bundle...**. The enhanced-logging setting itself is kept in `%APPDATA%\com.redcirclehca.dataextract\diagnostics.json`.

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18. Troubleshooting

"Isn't commonly downloaded" / "Windows protected your PC" on install. This is SmartScreen's reputation prompt for new software. In the browser, use the download's ⋯ menu → **Keep**; on the SmartScreen prompt, click **More info → Run anyway**. The prompt shows the verified publisher **Red Circle Healthcare Advisory Ltd** — the installer is signed by RedCircle.

The app can't sign me in. Confirm you are using your **username (your email address)** and the correct password. If you were newly set up, you may need to set a new password on first sign-in. Check that MFA codes are current. If your organisation filters internet traffic, ask IT to allow the AWS and `fileupload.redcircleai.com` hosts listed in section 2.

An export fails within a second with "invalid peer certificate" or "UnknownIssuer". The computer cannot verify the certificate of the RedCircle upload service, so the export stops before any data is read. This is usually a **missing root certificate on the computer**, and is most often seen on Windows Server rather than on a desktop PC.

Windows ships only a small set of root certificates and downloads the rest from Windows Update the first time one is needed. On a server where that download is blocked, or where the policy **Turn off Automatic Root Certificates Update** is set, the certificate that signs our service never arrives.

The same address will usually load without complaint in Microsoft Edge on the very same machine. That does not rule this out: Edge and Chrome carry their own built-in list of root certificates and do not use the Windows store.

To confirm, run this in PowerShell on the affected machine:

```
Get-ChildItem Cert:\LocalMachine\Root | Where-Object { $_.Thumbprint -eq '925A8F8D2C6D04E0665F596AFF22D863E8256F3F' } | Select-
```

No output means the certificate is missing. Check by **thumbprint**, not by name: a machine may already hold *Starfield Root Certificate Authority - G2*, which looks almost identical to the one required, *Starfield **Services** Root Certificate Authority - G2*, but is a different certificate and will not work.

To fix it, ask IT to install the missing root on that machine. Download **Starfield Services Root Certificate Authority - G2** from `https://www.amazontrust.com/repository/SFSRootCAG2.pem` (or **Amazon Root CA 1** from `https://www.amazontrust.com/repository/AmazonRootCA1.cer`, either will do), then in an **administrator** PowerShell:

```
certutil -addstore -f Root SFSRootCAG2.pem
```

The export should work immediately afterwards; no restart is needed. The longer-term fix is to allow automatic root certificate updates to reach `ctldl.windowsupdate.com`, since any other application on that machine using the Windows certificate store will hit the same problem.

I don't see my datasets. Check the **client** badge in the header — datasets are scoped to the active client. Switch clients if needed. Also check the financial-year filter on the datasets list.

A database source won't connect. Use **Test Connection** in the editor. Verify the host, port, database, authentication method, and credentials, and whether SSL is required. Consider creating a reusable SQL connection and linking to it.

A preview looks wrong (dates, columns, delimiter). For CSV, check the **Delimiter**, **Encoding**, **Date Format** (use the UK option for UK data), and **First row contains headers**. For Excel, check the sheet name and the row/column range. Use **Preview Data** to confirm before exporting.

Lots of NHS numbers show as invalid or as placeholders in the Identifier columns counts. Check the column holds NHS numbers and not another identifier. If it's a local number such as an MRN, switch the pattern to **Local patient ID**. If the source has its own dummy value that isn't on the list, add it under **Extra placeholders for this column**, or in **Settings → Identifier placeholders** if every source uses it. Invalid numbers are still exported and protected; they're only flagged.

My export can't be decrypted. Decryption requires the dataset's KMS key (and your password, if you set one at export time). Keep the dataset intact and remember any password you used — without them the export cannot be recovered.

Something isn't working and I need support. Reproduce the problem, then open **Settings → Save diagnostic bundle…** and send the `.zip` it creates to RedCircle. If support asks for more detail, turn on **Enhanced logging (verbose)** in Settings, reproduce the problem again, and save a fresh bundle. If you have enabled log sharing, RedCircle may already have the diagnostic events.

For questions or access requests, contact your RedCircle administrator.